

# OBSERVATIONS & RECOMMENDATIONS

After reviewing data collected from **Canobie Lake, Windham**, the program coordinators have made the following observations and recommendations.

We congratulate your group for sampling your lake **once** this summer. However, we encourage your monitoring group to sample **additional** times each summer. Typically, we recommend that monitoring groups sample **three times** per summer (once in **June, July**, and **August**). We understand that the number of sampling events you decide to conduct per summer will depend upon volunteer availability, and your monitoring group's goals and funding availability. However, with a limited amount of data it is difficult to determine accurate and representative water quality trends. Since weather patterns and activity in the watershed can change throughout the summer, from year to year, and even from hour to hour during a rain event, it is a good idea to sample the lake at least once per month during the summer.

If you are having difficulty finding volunteers to help sample or to travel to one of the laboratories, please call the VLAP Coordinator and DES will help you work out an arrangement.

We encourage your monitoring group to formally participate in the DES Weed Watchers program, a volunteer program dedicated to monitoring lakes and ponds for the presence of exotic aquatic plants. This program only involves a small amount of time during the summer months.

Volunteers survey their waterbody once a month from **May** through **September**. To survey, volunteers slowly boat, or even snorkel, around the perimeter of the waterbody and any islands it may contain. Using the materials provided in the Weed Watcher kit, volunteers look for any species that are suspicious. After a trip or two around the waterbody, volunteers will have a good knowledge of its plant community and will immediately notice even the most subtle changes. If a suspicious plant is found, the volunteers immediately send a specimen to DES for identification. If the plant specimen is an exotic species, a biologist will visit the site to determine the extent of the problem and to formulate a management plan to control the nuisance infestation. Remember that early detection is the key to controlling the spread of exotic plants.

If you would like to help protect your lake or pond from exotic plant infestations, contact Amy Smagula, Exotic Species Program Coordinator, at 271-2248 or visit the Weed Watchers website at [www.des.nh.gov/organization/divisions/water/wmb/exoticspecies/weed\\_watcher.htm](http://www.des.nh.gov/organization/divisions/water/wmb/exoticspecies/weed_watcher.htm).

## FIGURE INTERPRETATION

### CHLOROPHYLL-A

- **Figure 1 and Table 1:** Figure 1 in Appendix A shows the historical and current year chlorophyll-a concentration in the water column. Table 1 in Appendix B lists the maximum, minimum, and mean concentration for each sampling year that the lake has been monitored through VLAP.

Chlorophyll-a, a pigment found in plants, is an indicator of the algal abundance. Algae are typically microscopic plants that are naturally occurring in lake ecosystems and contain chlorophyll-a. The chlorophyll-a concentration measured in the water gives biologists an estimation of the algal concentration or lake productivity. **The median summer chlorophyll-a concentration for New Hampshire's lakes and ponds is 4.58 mg/m<sup>3</sup>.**

The current year data (the top graph) show that the chlorophyll-a concentration was **3.15 mg/m<sup>3</sup>** in **July**.

The historical data (the bottom graph) show that the **2008** chlorophyll-a mean is ***much less than*** the state median and is ***slightly less than*** the similar lake median. For more information on the similar lake median, refer to Appendix F.

Overall, visual inspection of the historical data trend line (the bottom graph) shows a ***relatively stable*** in-lake chlorophyll-a trend since monitoring began.

Please keep in mind that this trend is based on limited data. As your group expands its sampling program to include additional events each year, we will be able to determine trends with more accuracy and confidence.

After 10 consecutive years of sample collection, we will be able to conduct a statistical analysis of the historical data to objectively determine if there has been a significant change in the annual mean chlorophyll-a concentration since monitoring began.

While algae are naturally present in all lakes, an excessive or increasing amount of any type is not welcomed. In freshwater lakes, phosphorus is the nutrient that algae typically depend upon for growth in New Hampshire lakes. Algal concentrations may increase as nonpoint sources of phosphorus from the watershed increase, or as in-lake phosphorus sources increase. Therefore, it is extremely important for volunteer monitors to continually educate all watershed residents about management practices that can be implemented to minimize phosphorus loading to surface waters.

## TRANSPARENCY

- **Figure 2 and Tables 3a and 3b:** Figure 2 in Appendix A shows the historical and current year data for transparency with and without the use of a viewscope. Table 3a in Appendix B lists the maximum, minimum and mean transparency data without the use of a viewscope and Table 3b lists the maximum, minimum and mean transparency data with the use of a viewscope for each year that the lake has been monitored through VLAP.

Volunteer monitors use the Secchi disk, a 20 cm disk with alternating black and white quadrants, to measure how far a person can see into the water. Transparency, a measure of water clarity, can be affected by the amount of algae and sediment in the water, as well as the natural color of the water. **The median summer transparency for New Hampshire's lakes and ponds is 3.2 meters.**

The current year data (the top graph) show that the non-viewscope in-lake transparency was **4.25 meters** in **July**.

The historical data (the bottom graph) show that the **2008** mean non-viewscope transparency is ***slightly greater than*** the state median and is ***slightly less than*** the similar lake median. Please refer to Appendix F for more information about the similar lake median.

The current year data (the top graph) show that the viewscope in-lake transparency was ***greater than*** the non-viewscope transparency on the **July** sampling event. As discussed previously, a comparison of transparency readings taken with and without the use of a viewscope shows that the viewscope typically increases the depth to which the Secchi disk can be seen into the lake, particularly on sunny and windy days. We recommend that your group measure Secchi disk transparency with and without the viewscope on each sampling event.

It is important to note that viewscope transparency data are not compared to a New Hampshire median or similar lake median. This is because lake transparency with the use of a viewscope has not

been historically measured by DES. At some point in the future, the New Hampshire and similar lake medians for viewscope transparency will be calculated and added to the appropriate graphs.

Overall, visual inspection of the historical data trend line (the bottom graph) shows a **relatively stable** trend for in-lake non-viewscope transparency. Specifically, the transparency has **remained relatively stable ranging between 4.25 and 5.5 meters** since monitoring began in **2002**.

Please keep in mind that this trend is based on limited data. As your group expands its sampling program to include additional events each year, we will be able to determine trends with more accuracy and confidence.

Again, please keep in mind that this trend is based on only **seven** years of data. As previously discussed, after 10 consecutive years of sample collection, we will be able to conduct a statistical analysis of the historical data to objectively determine if there has been a significant change in the annual mean transparency since monitoring began.

Typically, high intensity rainfall causes sediment-laden stormwater runoff to flow into surface waters, thus increasing turbidity and decreasing clarity. Efforts should continually be made to stabilize stream banks, lake shorelines, disturbed soils within the watershed, and especially dirt roads located immediately adjacent to the edge of tributaries and the lake. Guides to best management practices that can be implemented to reduce, and possibly even eliminate, nonpoint source pollutants, are available from DES upon request.

### TOTAL PHOSPHORUS

- **Figure 3 and Table 8:** The graphs in Figure 3 in Appendix A show the amount of epilimnetic (upper layer) phosphorus and hypolimnetic (lower layer) phosphorus; the inset graphs show current year data. Table 8 in Appendix B lists the annual maximum, minimum, and median concentration for each deep spot layer and each tributary since the lake has been sampled through VLAP.

Phosphorus is typically the limiting nutrient for vascular plant and algae growth in New Hampshire's lakes and ponds. Excessive phosphorus in a lake can lead to increased plant and algal growth over time. **The median summer total phosphorus concentration in the epilimnion (upper layer) of New Hampshire's lakes and**

**ponds is 12 ug/L. The median summer phosphorus concentration in the hypolimnion (lower layer) is 14 ug/L.**

The current year data for the epilimnion (the top inset graph) show that the phosphorus concentration was **7.2 ug/L in July**.

The historical data show that the **2008** mean epilimnetic phosphorus concentration is ***much less than*** the state median and is ***slightly greater than*** the similar lake median. Refer to Appendix F for more information about the similar lake median.

The current year data for the hypolimnion (the bottom inset graph) show that the phosphorus concentration was **13 ug/L in July**.

The historical data show that the **2008** mean hypolimnetic phosphorus concentration is ***slightly less than*** the state median and is ***slightly greater than*** the similar lake median. Please refer to Appendix F for more information about the similar lake median.

Overall, visual inspection of the historical data trend line for the epilimnion shows a ***relatively stable*** phosphorus trend. Specifically, the mean annual epilimnetic phosphorus concentration has ***remained approximately the same*** since monitoring began in **2002**.

Overall, visual inspection of the historical data trend line for the hypolimnion shows a ***variable*** phosphorus trend since monitoring began. Specifically the mean annual concentration has ***fluctuated between approximately 8 and 19 ug/L*** since monitoring began in **2002**.

One of the most important approaches to reducing phosphorus loading to a waterbody is to continually educate watershed residents about the watershed sources of phosphorus and how excessive phosphorus loading can negatively affect the ecology and the recreational, economical, and ecological value of lakes and ponds.

#### TABLE INTERPRETATION

➤ **Table 2: Phytoplankton**

Table 2 in Appendix B lists the current and historical phytoplankton and/or cyanobacteria observed in the lake. Specifically, this table lists the three most dominant phytoplankton and/or cyanobacteria observed in the sample and their relative abundance in the sample.

The dominant phytoplankton and/or cyanobacteria observed in the **July** sample were ***Mallomonas (Golden-Brown)***, ***Ceratium (Dinoflagellate)***, and ***Anabeana (Cyanobacteria)***.

Phytoplankton populations undergo a natural succession during the growing season. Please refer to the “Biological Monitoring Parameters” section of this report for a more detailed explanation regarding seasonal plankton succession. Diatoms and golden-brown algae populations are typical in New Hampshire’s less productive lakes and ponds.

➤ **Table 2: Cyanobacteria**

A **small amount** of the cyanobacterium ***Anabaena*** was observed in the **July** plankton sample. ***This cyanobacteria, if present in large amounts, can be toxic to livestock, wildlife, pets, and humans.*** Please refer to the “Biological Monitoring Parameters” section of this report for a more detailed explanation regarding cyanobacteria.

Cyanobacteria can reach nuisance levels when phosphorus loading from the watershed to surface waters is increased and favorable environmental conditions occur, such as a period of sunny, warm weather.

The presence of cyanobacteria serves as a reminder of the lake’s delicate balance. Watershed residents should continue to act proactively to reduce nutrient loading to the lake by eliminating fertilizer use on lawns, keeping the lake shoreline natural, re-vegetating cleared areas within the watershed, and properly maintaining septic systems and roads.

In addition, residents should also observe the lake in September and October during the time of fall turnover (lake mixing) to document any algal blooms that may occur. Cyanobacteria have the ability to regulate their depth in the water column by producing or releasing gas from vesicles. However, occasionally lake mixing can affect their buoyancy and cause them to rise to the surface and bloom. Wind and currents tend to “pile” cyanobacteria into scums that accumulate in one section of the lake. If a fall bloom occurs, please collect a sample in any clean jar or bottle and contact the VLAP Coordinator.

➤ **Table 4: pH**

Table 4 in Appendix B presents the in-lake and tributary current year and historical pH data.

pH is measured on a logarithmic scale of 0 (acidic) to 14 (basic). pH is important to the survival and reproduction of fish and other aquatic life. A pH below 6.0 typically limits the growth and reproduction of fish. A pH between 6.0 and 7.0 is ideal for fish. The median pH value for the epilimnion (upper layer) in New Hampshire's lakes and ponds is **6.6**, which indicates that the state surface waters are slightly acidic. For a more detailed explanation regarding pH, please refer to the "Chemical Monitoring Parameters" section of this report.

The mean pH at the deep spot this year ranged from **6.52** in the hypolimnion to **7.35** in the epilimnion, which means that the water in the hypolimnion is **slightly acidic** and the epilimnion is **slightly basic**.

It is important to point out that the hypolimnetic (lower layer) pH was **lower (more acidic)** than in the epilimnion (upper layer). This increase in acidity near the lake bottom is likely due to the decomposition of organic matter and the release of acidic by-products into the water column.

Due to the state's abundance of granite bedrock and acid deposition received from snowmelt, rainfall, and atmospheric particulates, there is little that can be feasibly done to effectively increase lake pH.

➤ **Table 5: Acid Neutralizing Capacity**

Table 5 in Appendix B presents the current year and historical epilimnetic ANC for each year the lake has been monitored through VLAP.

Buffering capacity (ANC) describes the ability of a solution to resist changes in pH by neutralizing the acidic input. The median ANC value for New Hampshire's lakes and ponds is **4.8 mg/L**, which indicates that many lakes and ponds in the state are at least "moderately vulnerable" to acidic inputs. For a more detailed explanation about ANC, please refer to the "Chemical Monitoring Parameters" section of this report.

The mean acid neutralizing capacity (ANC) of the epilimnion (upper layer) was **16.2 mg/L**, which is **much greater than** the state median. In addition, this indicates that the lake has a **low vulnerability** to acidic inputs.

➤ **Table 6: Conductivity**

Table 6 in Appendix B presents the current and historical conductivity values for tributaries and in-lake data. Conductivity is the numerical expression of the ability of water to carry an electric

current, which is determined by the number of negatively charged ions from metals, salts, and minerals in the water column. The median conductivity value for New Hampshire's lakes and ponds is **38.4 uMhos/cm**. For a more detailed explanation, please refer to the "Chemical Monitoring Parameters" section of this report.

The mean annual epilimnetic conductivity at the deep spot this year was **270 uMhos/cm**, which is ***much greater than*** the state median.

The conductivity has ***remained elevated*** in the lake and tributaries since monitoring began. Typically, elevated conductivity indicates the influence of pollutant sources associated with human activities. These sources include failed or marginally functioning septic systems, agricultural runoff, stormwater runoff, and road runoff which contains road salt during the spring snow-melt. New development in the watershed can alter runoff patterns and expose new soil and bedrock areas, which could also contribute to increasing conductivity. In addition, natural sources, such as iron and manganese deposits in bedrock, can influence conductivity.

We recommend that your monitoring group conduct stream surveys and rain event sampling along tributaries with ***elevated*** conductivity to help identify the sources.

*For a detailed explanation on how to conduct rain event sampling and stream surveys, please refer to the 2002 VLAP Annual Report special topic article, which is posted on the VLAP website at **<http://www.des.nh.gov/organization/divisions/water/wmb/vlap/categories/publications.htm>**, or contact the VLAP Coordinator.*

We also recommend that your monitoring group conduct a shoreline conductivity survey of the lake and tributaries with ***elevated*** conductivity to help identify the sources.

*To learn how to conduct a shoreline or tributary conductivity survey, please refer to the 2004 special topic article, which is posted on the VLAP website at **<http://www.des.nh.gov/organization/divisions/water/wmb/vlap/categories/publications.htm>**, or contact the VLAP Coordinator.*

It is possible that de-icing materials applied to nearby roadways during the winter months may be influencing the conductivity in the lake. In New Hampshire, the most commonly used de-icing material is salt (sodium chloride).

Therefore, we recommend that the ***epilimnion*** (upper layer) be sampled for chloride next year. This additional sampling may help us



identify what areas of the watershed are contributing to the increasing in-lake conductivity.

*Please note that the DES Limnology Center in Concord is able to conduct chloride analyses, free of charge. As a reminder, it is best to conduct chloride sampling in the spring as the snow is melting and during rain events.*

➤ **Table 8: Total Phosphorus**

Table 8 in Appendix B presents the current year and historical total phosphorus data for in-lake and tributary stations. Phosphorus is the nutrient that limits the algae's ability to grow and reproduce. Please refer to the "Chemical Monitoring Parameters" section of this report for a more detailed explanation.

The phosphorus concentration in the **tributaries** was **relatively low** this year, which is good news. However, we recommend that your monitoring group sample the major tributaries to the lake during snow-melt and periodically during rainstorms to determine if the phosphorus concentration is **elevated** in the tributaries during these times. Typically, the majority of nutrient loading to a lake occurs in the spring during snow-melt and during intense rainstorms that cause soil erosion and surface runoff and within the watershed.

*For a detailed explanation on how to conduct rain event sampling and stream surveys, please refer to the 2002 VLAP Annual Report special topic article, which is posted on the VLAP website at <http://www.des.nh.gov/organization/divisions/water/wmb/vlap/categories/publications.htm>, or contact the VLAP Coordinator.*

➤ **Table 9 and Table 10: Dissolved Oxygen and Temperature Data**

Table 9 in Appendix B shows the dissolved oxygen/temperature profile(s) collected during **2008**. Table 10 in Appendix B shows the historical and current year dissolved oxygen concentration in the hypolimnion (lower layer). The presence of sufficient amounts of dissolved oxygen in the water column is vital to fish and amphibians and bottom-dwelling organisms. Please refer to the "Chemical Monitoring Parameters" section of this report for a more detailed explanation.

The dissolved oxygen concentration was **lower in the hypolimnion (lower layer) than in the epilimnion (upper layer)** at the deep spot on the **July** sampling event. As stratified lakes age, and as the summer progresses, oxygen typically becomes **depleted** in the hypolimnion by the process of decomposition. Specifically, the reduction of hypolimnetic oxygen is primarily a result of biological

organisms using oxygen to break down organic matter, both in the water column and particularly at the bottom of the lake where the water meets the sediment. When the hypolimnetic oxygen concentration is depleted to less than 1 mg/L, the phosphorus that is normally bound up in the sediment may be re-released into the water column, a process referred to as **internal phosphorus loading**.

**Lower** hypolimnetic oxygen levels are a sign of the lake's **aging** and **declining** health. This year the DES biologist collected the dissolved oxygen profile in **July**. We recommend that the annual biologist visit for the **2009** sampling year be scheduled during **June** so that we can determine if oxygen is depleted in the hypolimnion **earlier** in the sampling year.

➤ **Table 11: Turbidity**

Table 11 in Appendix B lists the current year and historical data for in-lake and tributary turbidity. Turbidity in the water is caused by suspended matter, such as clay, silt, and algae. Water clarity is strongly influenced by turbidity. Please refer to the "Other Monitoring Parameters" section of this report for a more detailed explanation.

The tributary and deep spot turbidity was **relatively low** this year, which is good news.

However, we recommend that your group sample the pond and any surface water runoff areas during significant rain events to determine if stormwater runoff contributes turbidity and phosphorus to the pond.

*For a detailed explanation on how to conduct rain event sampling, please refer to the 2002 VLAP Annual Report special topic article, which is posted on the VLAP website at*

***<http://www.des.nh.gov/organization/divisions/water/wmb/vlap/categories/publications.htm>***, or contact the VLAP Coordinator.

➤ **Table 12: Bacteria (*E.coli*)**

Table 12 in Appendix B lists the current year and historical data for bacteria (*E.coli*) testing. *E. coli* is a normal bacterium found in the large intestine of humans and other warm-blooded animals. *E.coli* is used as an indicator organism because it is easily cultured and its presence in the water, in defined amounts, indicates that sewage **may** be present. If sewage is present in the water, potentially harmful disease-causing organisms **may** also be present.

The *E. coli* concentration was **very low** at the Intake station sampled on the **July** sampling event. Specifically, each result was **10 counts or less**, which is ***much less than*** the state standard of 406 counts per 100 mL for recreational surface waters that are not designated public beaches and 88 counts per 100 mL for surface waters that are designated public beaches.

➤ **Table 13: Chloride**

Table 13 in Appendix B lists the current year and the historical data for chloride sampling. The chloride ion (Cl<sup>-</sup>) is found naturally in some surfacewaters and groundwaters and in high concentrations in seawater. Research has shown that elevated chloride levels can be toxic to freshwater aquatic life. In order to protect freshwater aquatic life in New Hampshire, the state has adopted **acute and chronic** chloride criteria of **860 and 230 mg/L** respectively. The chloride content in New Hampshire lakes is naturally low, generally less than 2 mg/L in surface waters located in remote areas away from habitation. The median epilimnetic chloride value for New Hampshire lakes and ponds is **5 mg/L**. Higher values are generally associated with salted highways and, to a lesser extent, with septic inputs. Please refer to the “Chemical Monitoring Parameters” section of this report for a more detailed explanation.

Chloride sampling was **not** conducted during **2008**.

➤ **Table 14: Current Year Biological and Chemical Raw Data**

Table 14 in Appendix B lists the most current sampling year results. Since the maximum, minimum, and annual mean values for each parameter are not shown on this table, this table displays the current year “raw,” meaning unprocessed, data. The results are sorted by station, depth, and then parameter.

➤ **Table 15: Station Table**

As of the spring of 2004, all historical and current year VLAP data are included in the DES Environmental Monitoring Database (EMD). To facilitate the transfer of VLAP data into the EMD, a new station identification system had to be developed. While volunteer monitoring groups can still use the sampling station names that they have used in the past and are most familiar with, an EMD station name also exists for each VLAP sampling location. Table 15 in Appendix B identifies what EMD station name corresponds to the station names you have used in the past and will continue to use in the future.

## DATA QUALITY ASSURANCE AND CONTROL

### Annual Assessment Audit:

During the annual visit to your lake, the biologist conducted a sampling procedures assessment audit for your monitoring group. Specifically, the biologist observed the performance of your monitoring group and completed an assessment audit sheet to document the volunteer monitors' ability to follow the proper field sampling procedures, as outlined in the VLAP Monitor's Field Manual. This assessment is used to identify any aspects of sample collection in which volunteer monitors failed to follow proper procedures, and also provides an opportunity for the biologist to retrain the volunteer monitors as necessary. This will ultimately ensure samples that the volunteer monitors collect are truly representative of actual lake and tributary conditions.

Overall, your monitoring group performed **very well** while collecting samples on the annual biologist visit this year! Specifically, the members of your monitoring group followed the majority of the proper field sampling procedures. However, the biologist did identify a few aspects regarding sample collection that the volunteer monitors could improve upon, as follows:

- **Anchoring at deep spot:** Please remember to use an anchor with sufficient weight and a sufficient amount of rope to prevent the boat from drifting while sampling at the deep spot. It is difficult for the biologist to collect an accurate and representative dissolved oxygen/temperature profile when the boat is drifting. In addition, it is difficult to view the Secchi disk and collect samples from the proper depths when the boat is drifting. Depending on the depth of the lake and the wind conditions, it may be necessary to use two anchors!

### USEFUL RESOURCES

*Best Management Practices to Control Nonpoint Source Pollution: A Guide for Citizens and Town Officials*, DES Booklet WD-03-42, (603) 271-2975 or

[www.des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-03-42.pdf](http://www.des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-03-42.pdf).

*Cyanobacteria in New Hampshire Waters Potential Dangers of Blue-Green Algae Blooms*, DES fact sheet WMB-10, (603) 271-2975 or  
[www.des.nh.gov/organization/commissioner/pip/factsheets/wmb/documents/wmb-10.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/wmb/documents/wmb-10.pdf).

*Erosion Control for Construction in the Protected Shoreland Buffer Zone*, DES fact sheet WD-SP-1, (603) 271-2975 or [www.des.nh.gov/organization/commissioner/pip/factsheets/sp/documents/sp-1.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/sp/documents/sp-1.pdf).

*Impacts of Development Upon Stormwater Runoff*, DES fact sheet WD-WQE-7, (603) 271-2975 or [www.des.nh.gov/organization/commissioner/pip/factsheets/aot/documents/wqe-7.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/aot/documents/wqe-7.pdf).

*Lake Protection Tips: Some Do's and Don'ts for Maintaining Healthy Lakes*, DES fact sheet WD-BB-9, (603) 271-2975 or [www.des.nh.gov/organization/commissioner/pip/factsheets/bb/documents/bb-9.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/bb/documents/bb-9.pdf).

*Low Impact Development Hydrologic Analysis*. Manual prepared by Prince George's County, Maryland, Department of Environmental Resources. July 1999. To access this document, visit [www.epa.gov/owow/nps/lid\\_hydr.pdf](http://www.epa.gov/owow/nps/lid_hydr.pdf) or call the EPA Water Resource Center at (202) 566-1736.

*Low Impact Development: Taking Steps to Protect New Hampshire's Surface Waters*, DES fact sheet WD-WMB-17, (603) 271-2975 or [www.des.nh.gov/organization/commissioner/pip/factsheets/wmb/documents/wmb-17.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/wmb/documents/wmb-17.pdf).

*Road Salt and Water Quality*, DES fact sheet WD-WMB-4, (603) 271-2975 or [www.des.nh.gov/organization/commissioner/pip/factsheets/wmb/documents/wmb-4.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/wmb/documents/wmb-4.pdf).

*Shorelands Under the Jurisdiction of the Comprehensive Shoreland Protection Act*, DES fact sheet SP-4, (603) 271-2975 or [www.des.nh.gov/organization/commissioner/pip/factsheets/sp/documents/sp-4.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/sp/documents/sp-4.pdf).

*Soil Erosion and Sediment Control on Construction Sites*, DES fact sheet WQE-6, (603) 271-2975 or [www.des.nh.gov/organization/commissioner/pip/factsheets/aot/documents/wqe-6.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/aot/documents/wqe-6.pdf).

*Weed Watchers: An Association to Halt the Spread of Exotic Aquatic Plants*, DES fact sheet WD-BB-4, (603) 271-2975 or [www.des.nh.gov/organization/commissioner/pip/factsheets/bb/documents/bb-4.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/bb/documents/bb-4.pdf).

*Watershed Districts and Ordinances*, DES fact sheet WD-WMB-16, (603) 271-2975 or

[www.des.nh.gov/organization/commissioner/pip/factsheets/wmb/documents/wmb-16.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/wmb/documents/wmb-16.pdf).